The application was originally made under the Patent Cooperation Treaty with the United States of America Patent Office acting as the receiving office on (86) 15 Dec 1980, being given an application number PCT/US80/01657. The application was searched by the United States of America Patent Office acting as the International Search Authority (ISA), and published by the International Bureau on (87) 25 Jun 1981 under serial number WO 81/01713 in the English language. The text of the application is contained in the publication made by the International Bureau as above identified.

(12) UK Patent Application (19) GB (11) 2 075 543 A

(21) Application No 8123474
(22) Date of filing 15 Dec 1980
(30) Priority data
(31) 77159
(32) 14 Dec 1979
(33) United States of America (US)
(43) Date of issue 18 Nov 1981
(51) INT CL³ (As given by ISA) C10B 49/10
(52) Domestic classification C5E AD
(56) Documents cited by ISA
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(58) Field of search by ISA US 201/2.5, 25, 31, 36; 48/197.R; 202/93, 99, 106, 108, 121

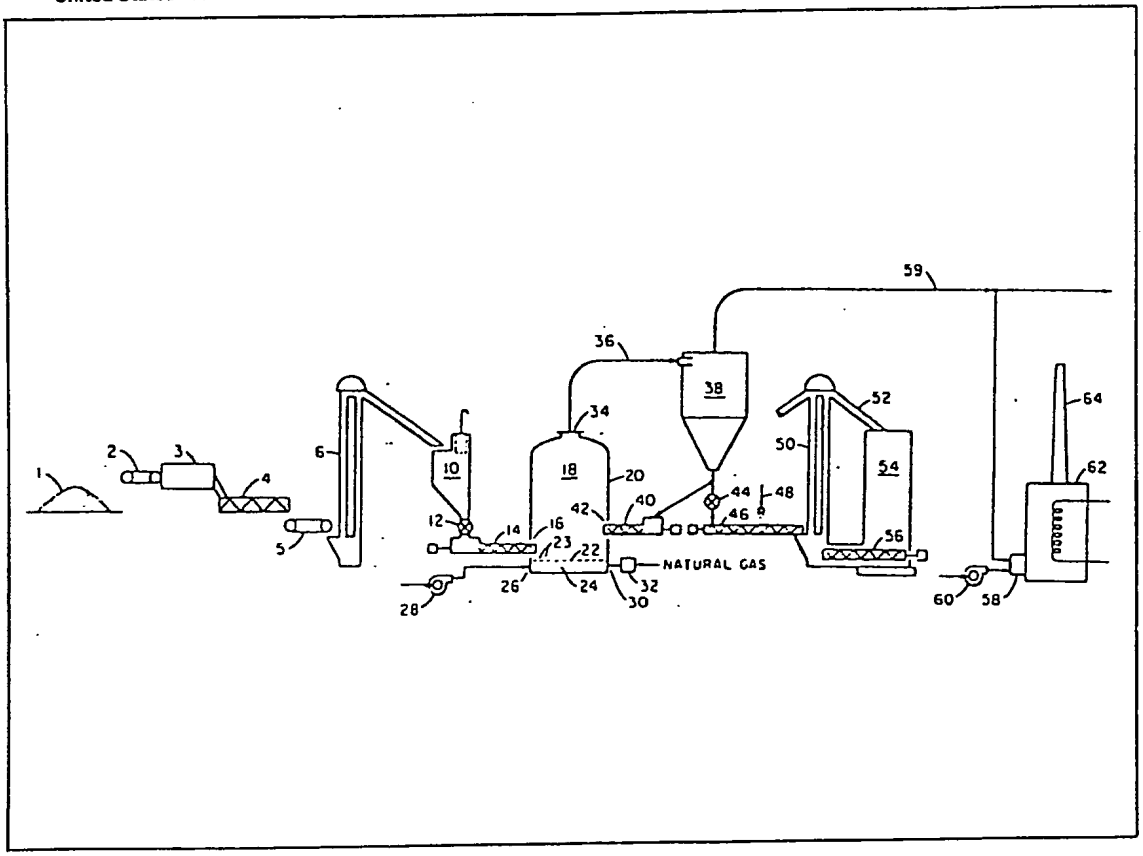
(71) Applicants
Energy Resources Co. Inc.,
185 Alewife Brook Parkway, Cambridge, Massachusetts 02138, United States of America

(72) Inventors
Robert S. Davis,
Herbert M. Kosstrin,
David Andrew Himmelblau

(74) Agents
Venner Shipley & Co.,
Rugby Chambers, 2 Rugby Street, London WC1N 3QU

(54) Fluidized-bed process to convert solid wastes to clean energy

(57) A method to pyrolyze biomass materials such as rice hulls, municipal waste, etc., to produce useful oil, gas, and char. Disposal of biomass waste materials by burning in boilers results in coating of parts by molten ash, and air pollution. The invention provides for disposal of biomass materials by conversion to oil, gas, and char by pyrolysis and/or gasification at 400—1100°C in a fluidized bed reactor containing a bed of inert material such as refractory sand using air or mixtures of O_2, N_2, CO_2, and water as the fluidizing gas. Another object is to provide pyrolysis apparatus including a shredder (3), a dryer (4), a gasifying chamber (20), and cyclone separator (38). Separated gases are burned in boiler (62) providing steam to dryer (4) and for electricity generation, or condensed to produce oil. Separated ash is recycled to gasifier (20) and removed to storage (54). Fluidizing gas is provided through port (26) and distributing plate (22).



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